Steelmax® D1

Portable Magnetic Drilling Machine

OPERATOR'S MANUAL

⚠ WARNING!

BEFORE USE, BE SURE EVERYONE USING THIS MACHINE READS AND UNDERSTANDS ALL SAFETY AND OPERATING INSTRUCTIONS IN THIS MANUAL.

EYE PROTECTION REQUIRED

HEARING PROTECTION REQUIRED

NEVER PLACE FINGERS NEAR CUTTING AREA OR MACHINE ARBOR

LINE VOLTAGE PRESENT

BEWARE OF ROTATING MACHINE PARTS

MODEL #SM-D1

Serial # _____ Date of Purchase _____

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1. GENERAL INFORMATION

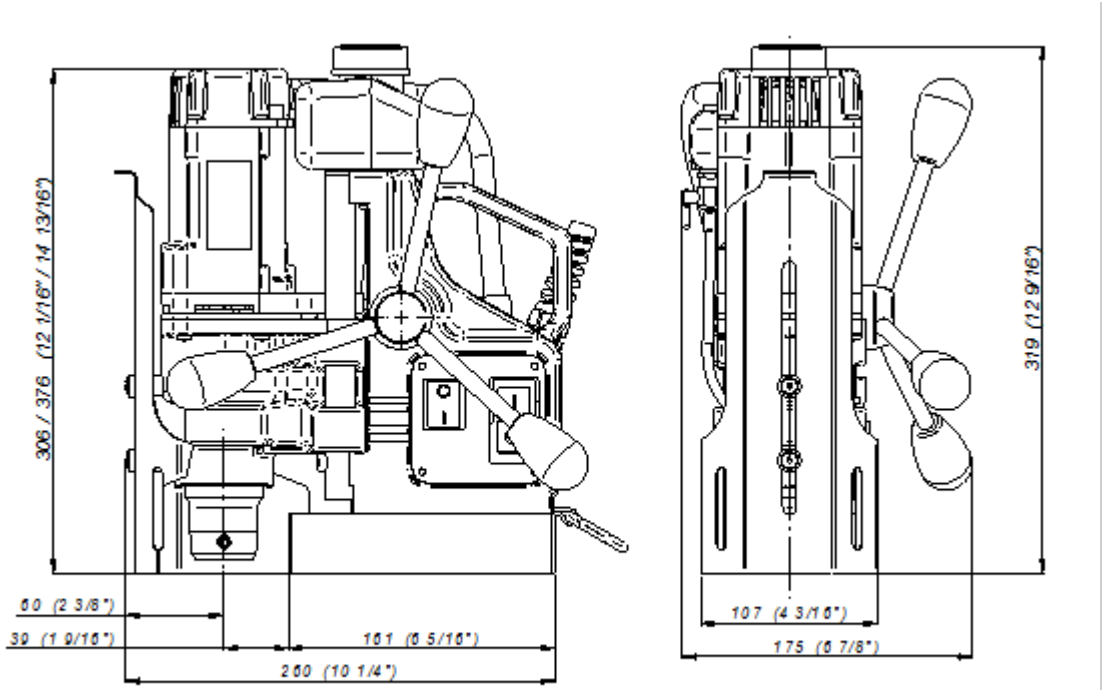
Portable drilling machines with electromagnetic bases are fast becoming very universal power tools not only at steel fabricating workshops or steel building sites but also at every factory maintenance workshop, truck manufacture & repair company, military equipment service, onboard ship maintenance shop etc.

Full advantages of electromagnetic drilling machines can be achieved only with optimal tooling. Annular cutters are designed and manufactured specifically for use with these machines and offer a whole range of advantages such as 4 inch diameter holes through more than 2 inch steel, in one pass and with precision not otherwise attainable without heavy stationary equipment.

The D1 drill is capable of milling 35 mm (1-3/8 inch) holes through 2 inch steel. The D1 is equipped with a powerful new generation, low heat electromagnet with Condensed Magnetic Flux (CMF) and with field control system.

Before you start work with the machine, please read these instructions carefully. Take special note of safety recommendations.

2. TECHNICAL DATA



Power supply	□ 220-240 V AC/ 50/60 Hz □ 120 V AC/ 50/60 Hz
Power required	1000 W
Motor power	920 W
Tool holder	3/4” Weldon, 19,05 mm/
Max. milling cutter diameter	1-3/8", 35 mm
Max. milling/drilling depth	2” , 51 mm
Insulation Class	First
Standard adhesive force of electromagnet on1” plate	9500 N
Slide stroke	2-3/4", 70 mm
Machine speeds /under load/	350 rpm
Electromagnetic base	3-18 x 6-5/16 x 1-7/16", 80x160x36.5 mm
Length of the power cord	10 ft, 3.0 m
Total weight	22 lbs, 10 kg
Noise level	85 dB
Surrounding temperature	0°C – 40°C

OPERATING INSTRUCTIONS (BEFORE YOU BEGIN)

Remove all contents from packaging and inspect to ensure no damage was incurred during shipping. Your SM-D1 package should include the following:

3. STANDARD EQUIPMENT

The D1 comes in a set which consists of:

metal box	1 pc
drilling machine	1 pc
cooling system	1 pc
4 mm Allen wrench	1 pc
spoke handles	3 pcs
safety chain with snap hook	1 pc
operator's manual	1 pc
chip guard	1 pc

4. GENERAL SAFETY ADVICE

The D1 drilling machine must not be used when:

1. The operator has not read the Operator's Manual.
2. The work to be done is not in agreement with the recommendations in this Manual.
3. Drilling machine is not complete or has been repaired with non-original parts.
4. Power supply parameters do not conform to those stated on the motor's plate.
5. Machines operator has not checked condition of the drilling machine, condition of power cable, control panel or cutter.
6. Power supply socket is not equipped with a protection circuit.
7. Machine is not secured with safety chain as a protection from falling down, especially when used at heights or in vertical or upside-down positions.
8. Bystanders are present in the immediate vicinity of machine.

Important rules of safe use of drilling machine

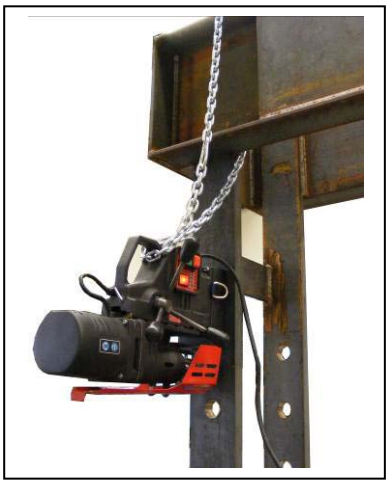
1) Before attempting to work with the machine check condition of power cord and plug.
2) The drilling machine should be connected to an installation equipped with protection circuit (neutral or ground) and protected with a 16 A fuse for 220V

and 32 A fuse for 120V. **When used on building sites, it must be supplied through a separation transformer made in the second class of protection.**

3) Machine can be used outdoors, but is not weatherproof. Do not expose to rain, snow or frost.
4) Machine should not be used on: rusty surfaces, steel plates with thick covered with paint, uneven surfaces or next to a welding machine.
5) In all cases, always use a safety chain/strap (see drawing 1). The safety chain should be tight! To avoid this situation the safety chain should be wrapped around the element it is hooked to.
6) Do not use the machine in explosion hazard zones.
7) Do not start work if the machine has excessive play on guide slides.
8) Always wear safety goggles and ear protection.
9) Do not remove metal chips with bare hands.
10) Do not touch the spindle and the cutter during work.
11) Tools must be fastened firmly. When an annular cutter is used, check before start of work to ensure tool holding screws are tight.
12) Do not use dull or damaged tools.
13) Do not use annular cutter without pilots, and arbors without ejection spring.
14) Use tools recommended in Operator's Manual only.
15) After use, always clean metal chips and coolant from drilling machine.
16) Always unplug the machine from the power supply before doing any work on the machine.
17) In the event that the machine falls on a hard surface, from a height, is wet or is subjected to other unfortunate events that could affect its technical state - work should be terminated immediately and the machine should be sent to service for inspection as soon as possible.

Do not use D1 drill on steel thinner than (3/8", 10 mm). On thin steel (less than 3/8" (10 mm)) magnet's adhesive power is significantly reduced which can cause machines failure or individuals injury. The entire surface of the electromagnetic base should be located on the work piece!

It is recommended that the surface under the electromagnetic base be sanded down with abrasive paper, before positioning the machine!

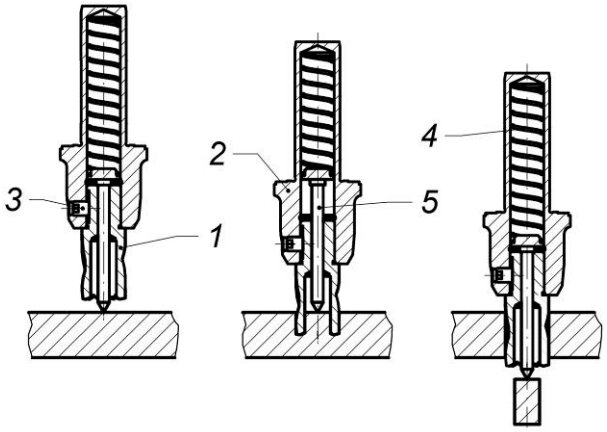


Drawing 1. Examples how safety chain should be fastened.

5. START UP AND OPERATION

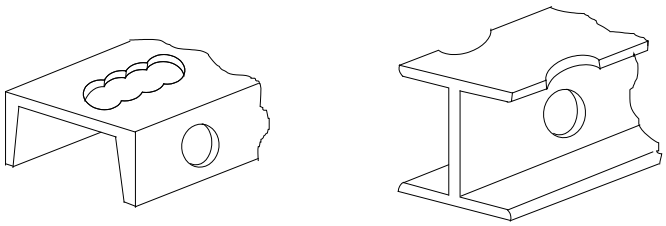
5.1 Cutters and optional equipment features.

This drilling machine's spindle has a Weldon Shank type socket 3/4" or 19,05 mm and is specifically designed for use with annular cutters.



Drawing 2.
Principle of milling cutter's work

Annular cutter (1) is placed inside arbor body (2) and is fastened with screws (3). While fastening the cutter in the socket, be aware that screws should be screwed tight so that they will not come unscrewed. It is important to position the cutter in relation to the socket in such a way that fixing flats on the cutter shank are positioned opposite to the fixing screws (3). Both fastening screws(3), should be used to fasten the cutter. Pilot (5) is located inside the cutter. It makes it easier to position milling cutter over center of a planned hole. During drilling, as the cutter goes into the steel, the pilot moves back into the arbor body and tightens discharge spring (4). That spring ejects slug which is a by-product of milling a hole with an annular cutter.



Drawing 3.
A few types of holes that can be done with a milling cutter

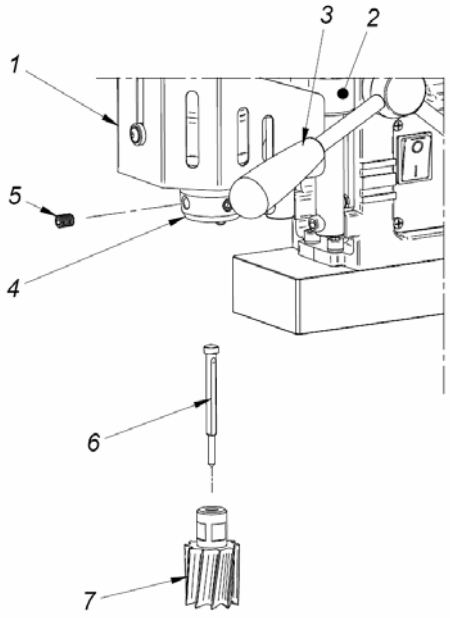
Basically annular cutters are designed to make through holes. On occasions when there is a need for an overlapping hole the pilot should not be used.

5.1.1 Installing and uninstalling the annular cutter

⚠ **Annular cutter installation and uninstallation should be carried out when the machine is turned off and the power cord is unplugged!**

<u>Installing</u> the annular cutter:

1. Raise the drive and the slide (2) up using the lever (3);
2. Raise the guard (1) to the maximum height in order to attain access to the screws (5) in the spindle (4);
3. Insert the appropriate type of pilot (6) into the annular cutter (7);
4. Position the annular cutter (7) with the cutter facing up, so that the flat sides of the cutter are facing the screws (5)
5. Put the annular cutter (7) into the spindle socket (4);
6. Tighten both screws securely (5).



<u>Uninstalling</u> the annular cutter:

1. Raise the drive and the slide (2) up using the lever (3);
2. Raise the guard (1) to the maximum in order to attain access to the spindle (4) screws (5).
3. Loosen the screws (5);
4. Remove the annular cutter (7) and the pilot (6) from the spindle socket (4).

5.2 Operating instructions

The machine is supplied in a metal box. Check if all parts listed in paragraph 3 are included. Steel elements of the drilling machine are protected for transit and storing with grease film. Before first start up of the machine all grease should be removed. Before each use all spoke handles should be screwed into pinion.

Control panel,

Control panel includes:

- 2-position main switch (01),
- START-STOP button (02),

a) In order to start the machine press the main switch (01) on “I“ button. Now you can start the motor by pressing green button „ I” (02).
b) Stop the motor by pushing the red button, “O” (then the motor is switched OFF, but the electromagnetic base is still ON) (02).
c) To move machine into next drilling spot, stop the motor as described above and push the magnet switch (01) to the position “O”.

Drawing 4.
Control panel

CAUTION: READ THE WHOLE INSTRUCTIONS MANUAL BEFORE ATTEMPTING TO START UP

5.3 Before you cut

Before positioning the machine on the work piece, always make sure that:

- work piece is made of steel;
- thickness of work piece is at least 3/8" (10 mm)
- surface of steel under the magnet is flat
- wipe, brush or sand down clean surface where you intended to place the drilling machine, so that you remove rust, paint, dirt etc which would reduce adhesive power of the electromagnetic base.

Install drill bit, annular cutter or other tooling such as tap or reamer in the machine before plugging it in. Then plug it in (see paragraph 3) and position where you wish to use it. Place the machine so that the tool is over the center of the hole you intend to make and turn the magnetic base ON.

Prior to use always make sure that the machine is secured from falling down with <u>original</u> chain (as described in paragraph 4 "Important rules of safe use of drilling machine").

5.4 Cutting

- Cooling and lubricant fluid commercially available in concentrated form are recommended for cooling twist drill bits and annular cutters.
It's allowed to use emulsions formed from a mixture of water and drilling oil.

⚠ **Do not use clean water as the liquid cooling and lubricant.**

The cooling system is an integral part of the machine and should always be used. (see point 5.7)

Warning: The cooling system can only be used when drilling machine is in vertical position. In other positions additional external source of cooling should be used, for example: a coolant bottle with a long nozzle, or a paste type lubricant.

- Check to make sure the cooling system is working. Open coolant reservoir's valve and apply pressure on the pilot by turning spokes counter clockwise. As the pilot starts to sink into the cutter, cooling liquid should start to run down cutters inner wall. If there is no liquid flowing down, check to make sure valve is fully opened. It may take a few seconds for cooling liquid to fill the whole system.

- Turn the motor on.

Bring the cutter gently into contact with the work piece and slowly start to apply pressure on the cutter.

Making a hole with a milling cutter should ideally be done in one pass. It makes the cutter work better and easier to eject the slug after the hole is completed. If you experience slugs getting stuck inside a cutter after hole is complete, try to reduce pressure on the cutter or use a different coolant. Do not allow excessive swarf build up around the cutter and arbor.

WARNING: when the milling cutter goes through the material the slug can be pushed out, often with considerable force. Pay attention to avoid injury.

- After a hole is made the cutter should be withdrawn back and both the motor and the electromagnet should be switched OFF.
- When work with the machine is finished, the power cord should be disconnected from the power source. Clean the swarf, coolant, etc, from the machine. The cutter should be removed and cleaned.

5.5. How to use the special functions

There are many causes which can reduce magnet holding force. These can be: insufficient work piece thickness, paint coating, rust or dirt, uneven and rough surfaces, extensive wear of the magnets bottom surface etc.

If after turning the drills electromagnet ON, the motor starts, but then stops when you remove your finger from the 'ON' button, this can be caused by the machines safety system, which has detected insufficient magnet holding power. You can make the motor run by continuing to hold the green Start "I" button. To eliminate this situation, it is necessary to improve magnetic properties of the work piece or recondition the magnetic base.

Electromagnets dual clamping system.

Machines magnetic base is supplied with a half of normal voltage every time the magnet is On but the motor is OFF.

This feature reduces power supply consumption and extends magnets durability.

Full power of machines magnet (9500 N.) is obtained a 1.5 second after the motor is switched ON

5.6 The overload protection.

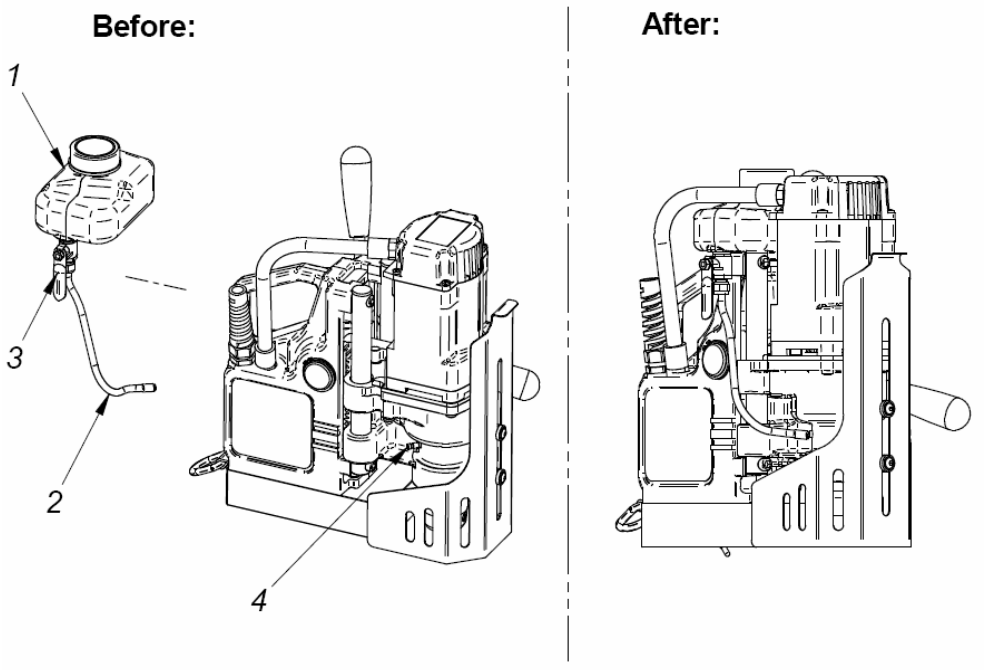
The drilling machine is equipped with overload protection system. If machine is working close to overload limit it can be switched off, automatically.

In this case the operator should turn it on again.

5.7 Installing and uninstalling the cooling system

Installing the cooling system:

a) Place the machine in the vertical position,
b) Raise the drive and the slide up by using the lever,
c) Attach the cooling system,
d) Install the end of the cooling hose (2) on the connection end (4) in the reducer.



Before starting the machine:

- Remove the bottle's cap,
- Fill it with cooling lubricant,
- Replace bottle cap.

Upon completion of the above steps, the bottle cap should be loosened by 1/3 of a turn to allow airflow into bottle. Then turn on the valve (3) to start liquid flowing to the hose, after which the machine can be started (see II pt. 3)

After completing work, one must remember to tighten the bottle cap and turn off the valve (3) (to prevent liquid from leaking when the machine is not in use) and remove the cooling system before placing the machine in the box.

<u>Uninstalling</u> the cooling system:

a) Place the machine in the vertical position,
b) Raise the drive and the slide up by using the lever,
c) Remove the end of the cooling hose (2) on the connection end (4) in the reducer,
d) Remove the cooling system.

6. MAINTENANCE AND SERVICE

- **The D1 machine is equipped with a maintenance free system for adjustment of guide slides.**
- Check condition of carbon brushes after every 100 hours of work. Replacement of brushes is possible without removal of motor unit from the unit. (see point 6.1) Other repair work should be done only by authorized service points, appointed by distributor.
- To prevent the machine from rusting (especially when used outdoors) all steel parts should be covered with thin layer of grease film.

WARNING: The safety strap and web must be replaced after every occurrence when machine came loose from steel and hung or pulled on the strap and web.

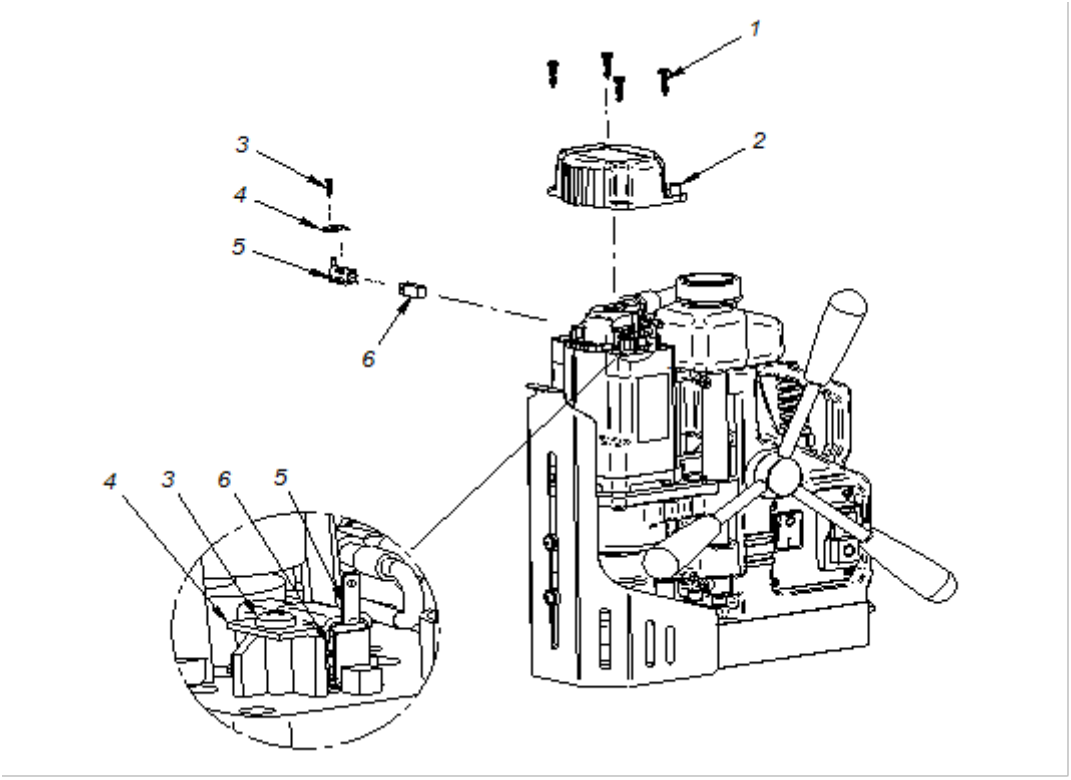
If work piece thickness is less than 3/16” (5mm), the magnetic adhesion detection system will not allow the motor to start. The same system will turn the motor OFF after even a slight movement of the magnetic base.

<u>Caution:</u> In the case that the machine falls on a hard surface, from a height, is wet or is subjected to other unfortunate events that could affect its technical state - work should be terminated immediately and the machine should be sent to service for inspection as soon as possible.

6.1 Replacement of motor brushes

The carbon brushes of the D1 drill should be monitored every 100 working hours.

⚠ **Replacement of motor brushes should be carried out when the machine is switched off and with the power cord unplugged!**



1. Loosen 4 4x19 screws (1), fastening the motor cover (2).
2. Remove the motor cover (2).
3. Loosen 3x13 screws (3), fastening the pressure plate (4) of the brush holder (5).
4. Remove the brush holder pressure plate (4).
5. Be careful not to remove the brush conduit, lightly raise the brush holder (5) and remove the motor brush (6).
6. Monitor brush length - If the length is less than 5 mm, it must be exchanged for a new brush.
7. Carry out all actions in reverse, in order to install the motor.

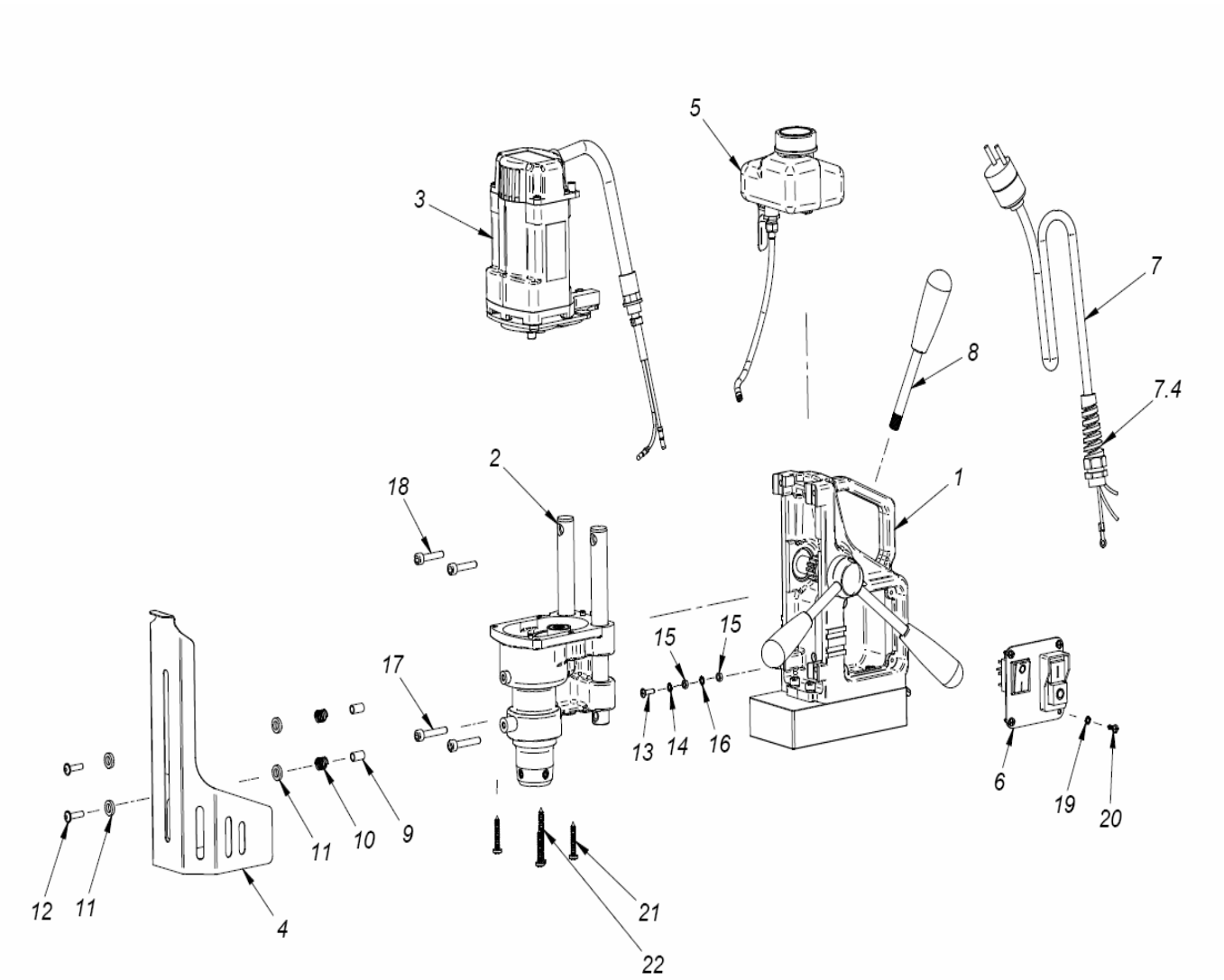
Caution: During the installation of the brush-holder (5), pay attention to the placement of conductors under the brush-holder - they must be placed in a special recess made in the motor housing.

After replacement of new brushes, they must be ground in for about 20 minutes on the idle gear. Replacement of motor brushes is possible without removing the drive from the drill.

7. Parts List / Exploded Views

WRT-0440-24-10-00-0			DRILLING MACHINE Steelmax D1 /115V	
WRT-0440-24-20-00-0			DRILLING MACHINE Steelmax D1 /230V	
ITEM	PART NUMBER	VERSION	DESCRIPTION	QTY
1	STJ-0440-01-00-00-1	2011	FRAME ASSEMBLY	1
2	RDK-0440-02-00-00-1	1555	GEARBOX ASSEMBLY	1
3	SLN-0440-03-00-00-3	2012	MOTOR ASSY/120V	1
3	SLN-0440-03-00-00-5	2013	MOTOR ASSY/230V	1
4	OSL-0440-04-00-00-0	2486	GUARD ASSY,	1
5	UKL-0440-05-00-00-1		COOLANT BOTTLE ASSY,	1
6	PNL-0272-04-00-00-4	2015	CONTROL PANEL ASSEMBLY /120V,	1
6	PNL-0272-04-00-00-5	2014	CONTROL PANEL ASSEMBLY /230V,	1
	SZN-0075-00-51-00-5		POWER CORD 120V 3x2,08	1
7.4	DLW-000007		STRAIN RIELIEF PG11	1
7	SZN-0212-10-02-00-2		POWER CORD 230V 3x1,5	1
7.4	DLW-000007		STRAIN RIELIEF PG11	1
8	DZW-0212-12-00-00-0		SPOKE HANDLE INCLUDING KNOB (ASSY),	3
9	TLJ-0399-06-00-00-0		LOWER SLEEVE,	2
10	SPR-000030		PUSH SPRING,	2
11	PDK-000151		NYLON WASHER SR1940,	4
12	WKR-000395		SOCKET BUTTON HEAD CAP SCREW WITH FLANGE M5x20,	2
13	WKR-000113		CROSS RECESSED RAISED COUNTERSUNK HEAD SCREW M4x16	1
14	PDK-000060		SPRING WASHER-4.3	1
15	NKR-000013		HEX NUT M4	2
16	PDK-000043		SPRING WASHER-4.1	1
17	SRB-000122		HEX. SOCKET BOLT M-6X35	2
18	SRB-000119		HEX. SOCKET BOLT M6x30	2
19	PDK-000161		SPRING WASHER 3,7	4
20	WKR-000415		CROSS RECESSED PAN HEAD TAPPING SCREW 3,5x13	4
21	WKR-000302		SCREW FOR PLASTIC M5x30	3
22	WKR-000237		CROSS RECESSED CHEESE HEAD SCREW M5x50	1
25*	ZST-0440-25-00-00-0	2019	EQUIPMENT SET	1
25.1*	KLC-000007		HEX. WRENCH S=4	1
25.2*	LNC-0129-80-01-00-0		SAFETY CHAIN	1
25.4*	INS-0239-48-00-00-3		SERVICE MANUAL	1
26*	SKR-0440-12-00-00-0	1670	METAL BOX	1
27*	SMR-000001		GREASE LUBRIPLATE, GR-132	0,055kg
28*	NKL-0440-15-08-04-0		LABEL FOR SIDE OF METAL BOX - small	4
29*	NKL-0440-15-08-05-0		LABEL FOR LID OF METAL BOX - big	1

*not shown on the drawing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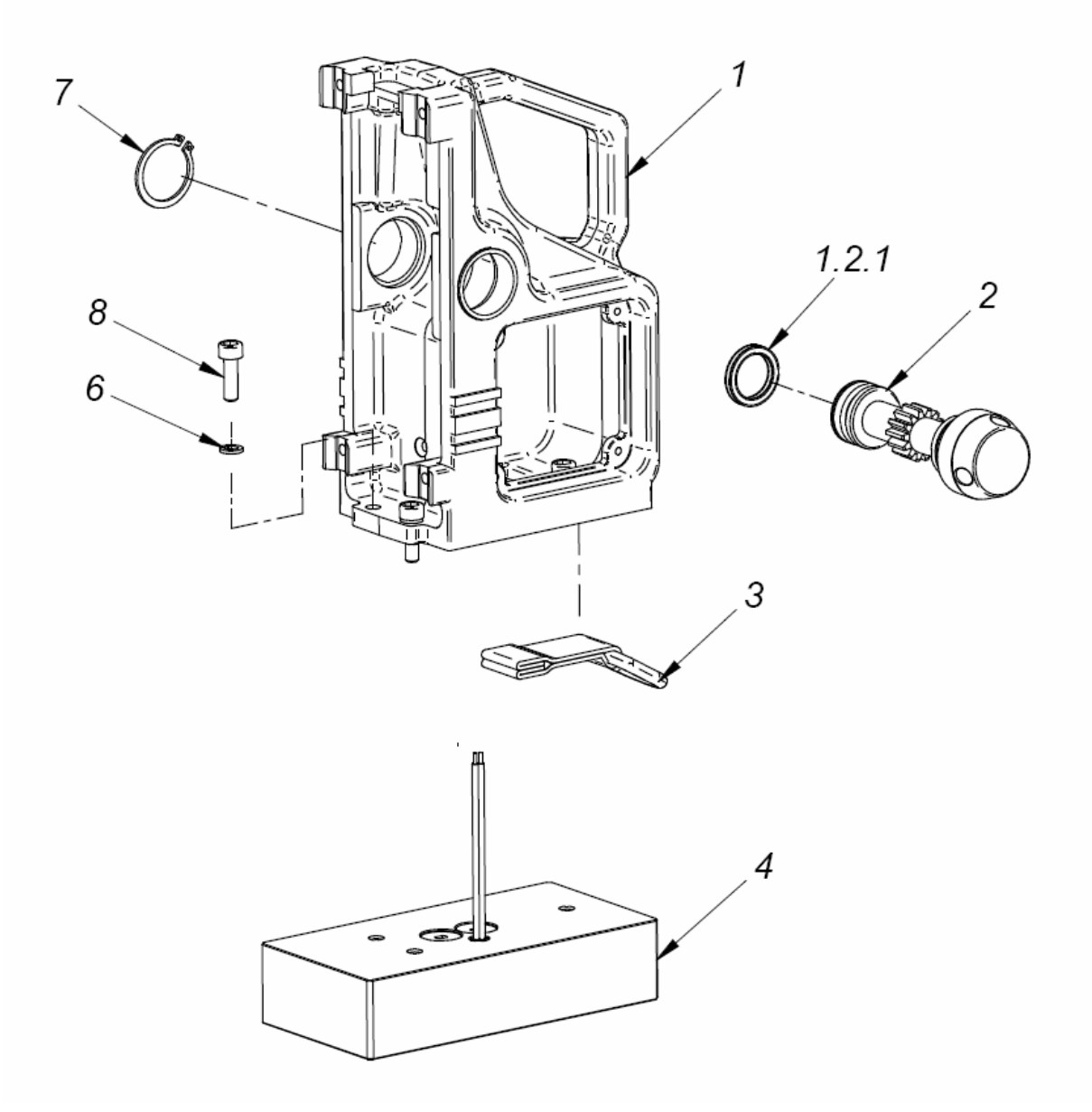
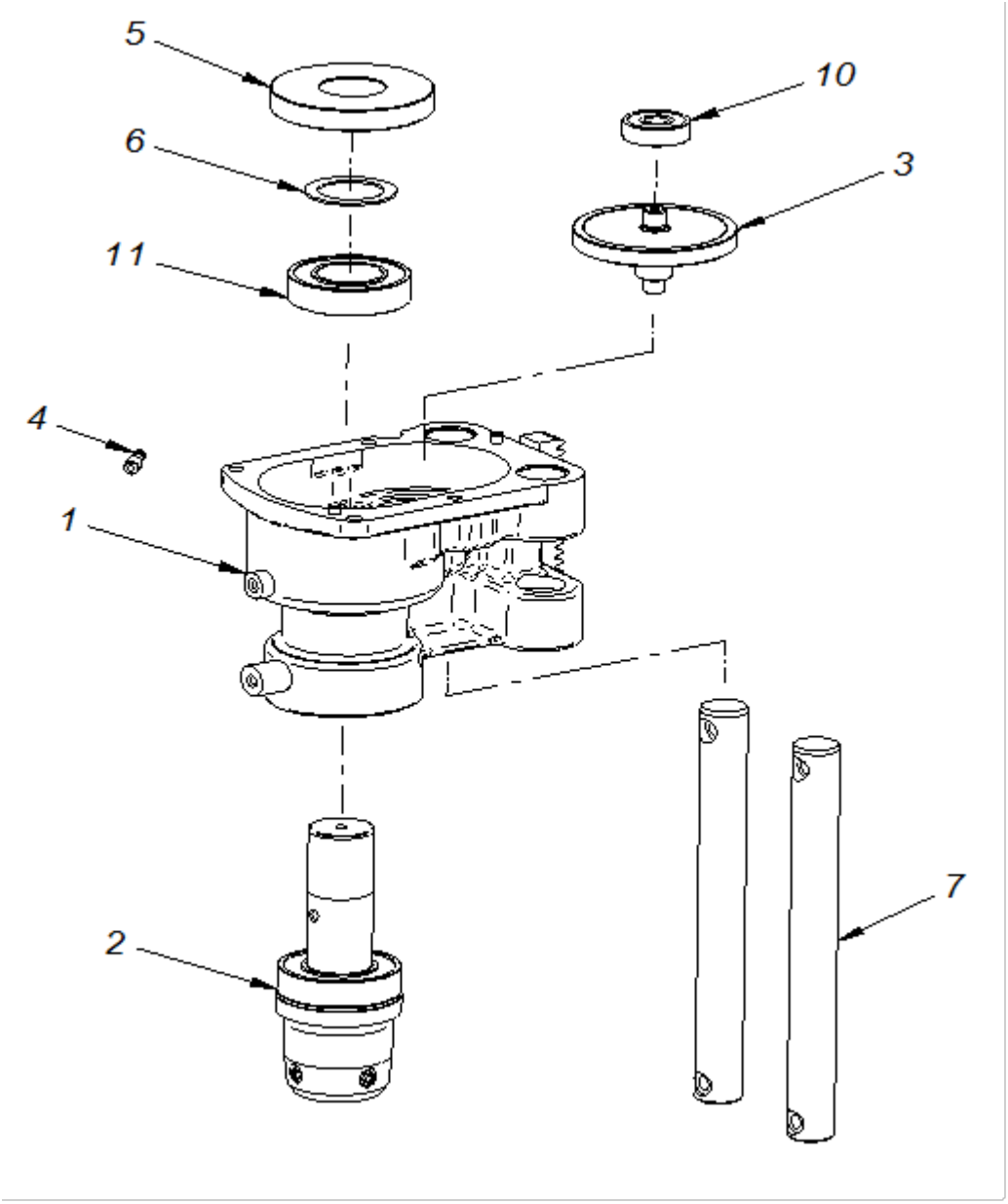
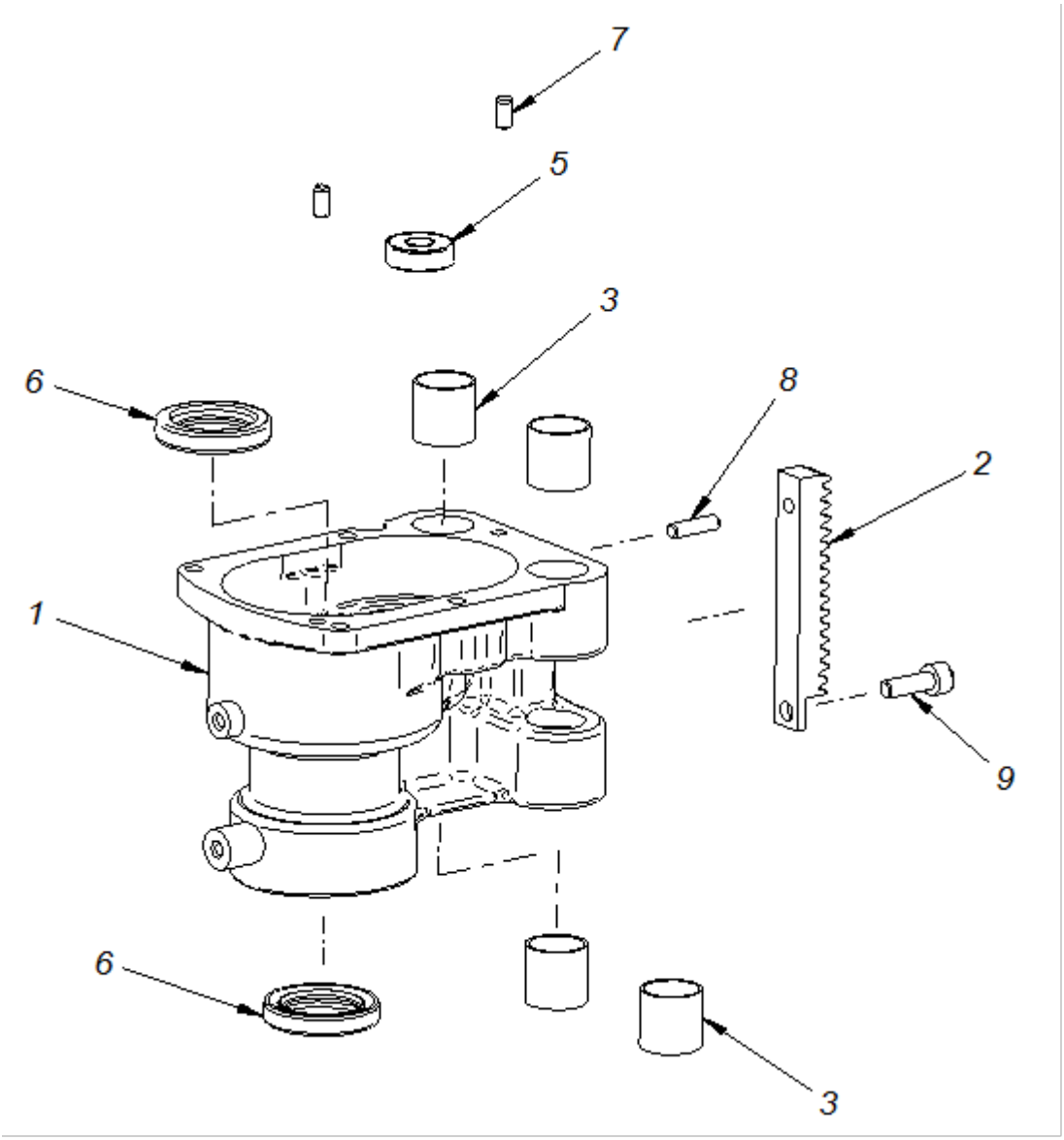
STJ-0440-01-00-00-1			FRAME ASSEMBLY	
ITEM	**PART NUMBER**	**VERSION**	**DESCRIPTION**	**QTY**
1.1	KRP-0440-01-01-00-1	1549	MAIN BODY ASSY	1
1.2	WLK-0440-01-02-00-0		PINION SHAFT ASSY z14	1
1.2.1	USZ-000015		SEAL QUAD-RING 20,22x3,53	2
1.3	PAS-0272-01-03-00-0		D-RING STRAP	1
1.4	PDS-0378-02-00-00-1	1063	ELECTROMAGNETIC BASE,	1
1.6	PDK-000048		SPRING WASHER 6,1	3
1.7	PRS-000019		EXTERNALE RETAINING RING 28z	1
1.8	SRB-000113		HEX. SOCKET BOLT M6x20	3
1.9*	NKL-0440-15-08-02-0		FRAME LABEL	1



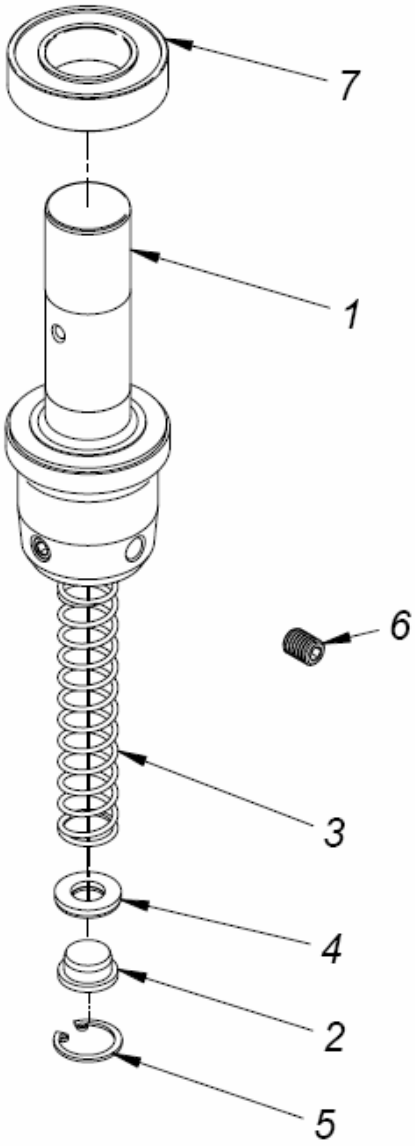
RDK-0440-02-00-00-1			GEARBOX ASSEMBLY	
ITEM	**PART NUMBER**	**VERSION**	**DESCRIPTION**	**QTY**
2.1	KRP-0440-02-01-00-1	1551	GEARCASE ASSY	1
2.2	WRZ-0272-02-02-00-0		MOTOR SPINDLE ASSEMBLY	1
2.3	WLK-0271-02-03-00-1		PINION SHAFT ASSEMBLY	1
2.4	KNC-0234-00-10-00-0		COOLANT COUPLING AMT2-H-19	1
2.5	KOL-0271-02-05-00-1		GEAR - 52	1
2.6	PRS-0271-02-06-00-0		DISTANCE RING	1
2.7	PRT-0440-02-02-00-1		GUIDE	2
2.10	LOZ-000072		BEARING BALL 629 SHIELDED	1
2.11	LOZ-000047		BEARING BALL 6005 2RS	1



KRP-0440-02-01-00-1			GEARCASE ASSY	
ITEM	**PART NUMBER**	**VERSION**	**DESCRIPTION**	**QTY**
2.1.1	KRP-0440-02-01-01-2	1550	GEARCASE	1
2.1.2	LST-0271-02-01-02-1		GEAR RACK	1
2.1.3	TLJ-000031		SELF-LUBRICATING SLEEVE 18x20x20	4
2.1.5	LOZ-000053		BEARING 608 2Z	1
2.1.6	PRS-000070		SEAL 25x37x7	2
2.1.7	KLK-000044		DOWEL, PIN 5 x 10 MM	2
2.1.8	KLK-000048		DOWEL, PIN 5 x 18	1
2.1.9	SRB-000111		HEX. SOCKET BOLT M6X18	1

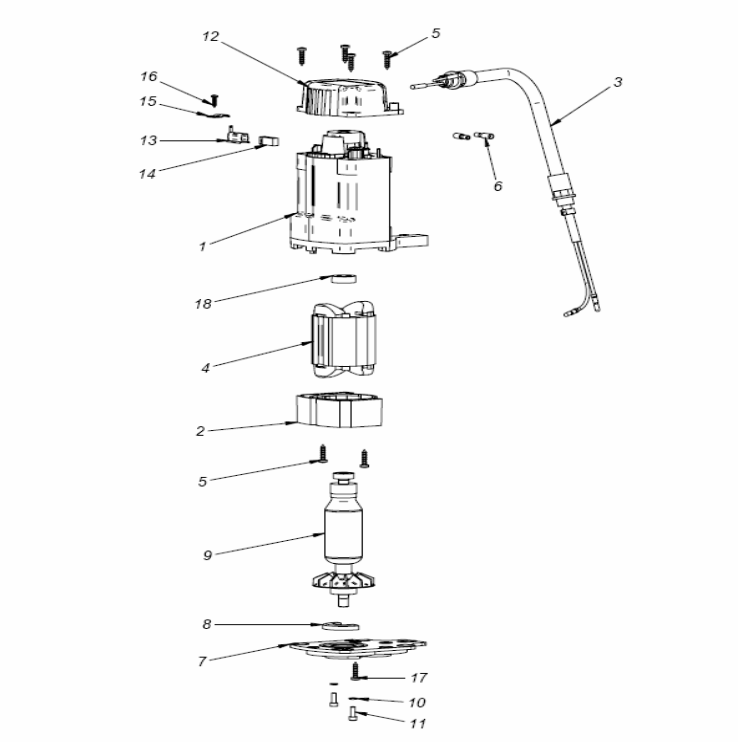


WRZ-0272-02-02-00-0			MOTOR SPINDLE ASSEMBLY.	
ITEM	**PART NUMBER**	**VERSION**	**DESCRIPTION**	**QTY**
2.2.1	KRP-0272-02-02-01-0		MOTOR SPINDLE	1
2.2.2	WYP-0139-00-02-00-1		PLUNGER	1
2.2.3	SPR-0271-02-02-03-0		SPRING	1
2.2.4	USZ-0279-02-01-06-0		SEAL	1
2.2.5	PRS-000009		INTERNAL RETAINING RING 19W	1
2.2.6	WKR-000059		HEX. SET SCREW M8 x 10	2
2.2.7	LOZ-000047		BEARING BALL 6005 2RS	1

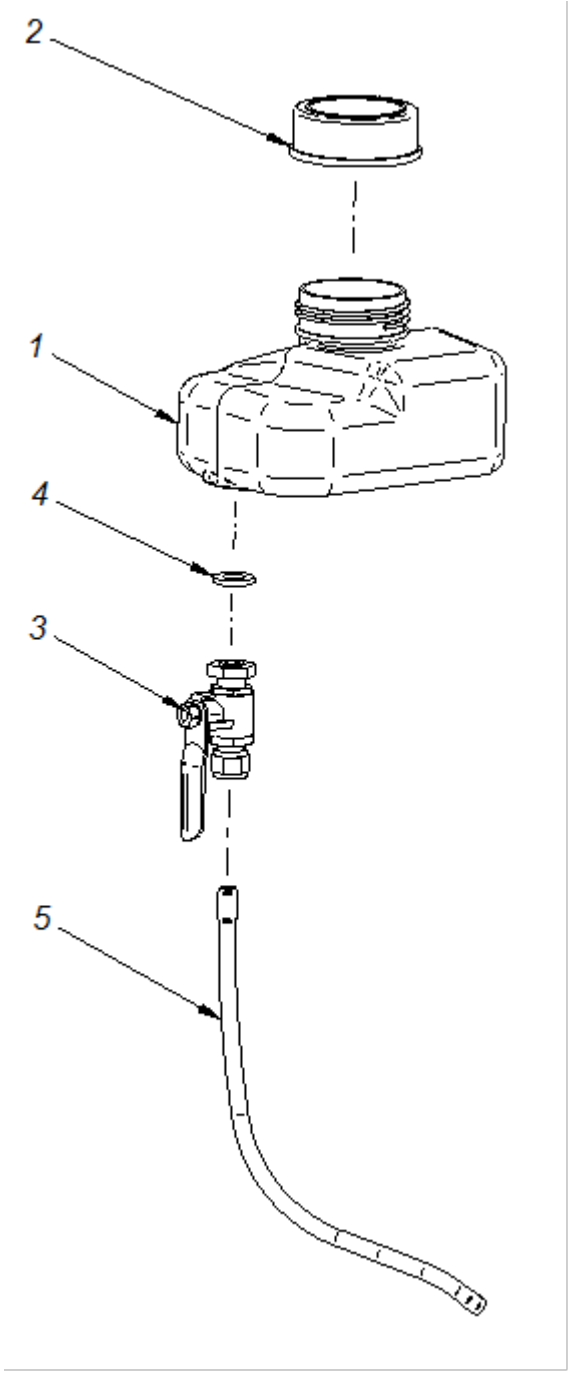


SLN-0440-03-00-00-3		2012	MOTOR ASSY/120V	
SLN-0440-03-00-00-5		2013	MOTOR ASSY/230V	
ITEM	**PART NUMBER**	**VERSION**	**DESCRIPTION**	**QTY**
3.1	OBD-0272-03-01-01-1		FIELD FRAME	1
3.2	OSL-0271-03-01-02-0		GUARD	1
3.3	PWD-0440-03-01-00-0		MOTOR CORD	1
3.4	STN-000002		FIELD /120V C-34116/1	1
3.4	STN-000004		FIELD /230V C-34116	1
3.5	WKR-000241		SCREW FOR PLASTIC 4x19	6
3.6	KNC-000006		CONNECTOR 48-201-06	2
3.7	PKR-0272-03-02-01-2		GEARBOX COVER	1
3.8	PRS-0271-03-02-02-1		GEARBOX COVER RING	1
3.9	WRN-000016		ARMATURE ASSY/120V C-34115/1	1
3.9	WRN-000017		ARMATURE ASSY/230V C-34115	1
3.10	PDK-000043		SPRING WASHER 4,1	2
3.11	SRB-000062		SOCKET HEAD CAP BOLT 4x12	2
3.12	PKR-0440-03-02-00-0		FIELD FRAME COVER	1
3.13	SCT-0271-03-06-00-0		BRUSH HOLDER	2
3.14	SCZ-000008		MOTOR BRUSH 6x9x17,	2
3.15	PLY-0271-03-07-00-0		BRUSH HOLDER PRESSURE PLATE	2
3.16	WKR-000359		CROSS RECESSED PAN HEAD TAPPING SCREW 3x13	2
3.17	WKR-000236		CROSS RECESSED PAN HEAD TAPPING SCREW 5x16	1
3.18	WKL-000001		BEARING INSERT 19x7,5	1
3.19	WKR-000301		SCREW FOR PLASTIC TW 5x14	2
3.20*	NKL-0272-15-00-00-0		LABEL FOR ELECTRICAL INSTALATION,	1
3.21*	NKL-0272-25-01-03-0		LABEL: WARRANT TO USE OF HEARING AND EYE PROTECTION	1
3.22*	TBL-0440-15-08-03-0		MOTOR LABEL /115V	1
3.22*	TBL-0440-15-13-03-0		MOTOR LABEL /230V	1

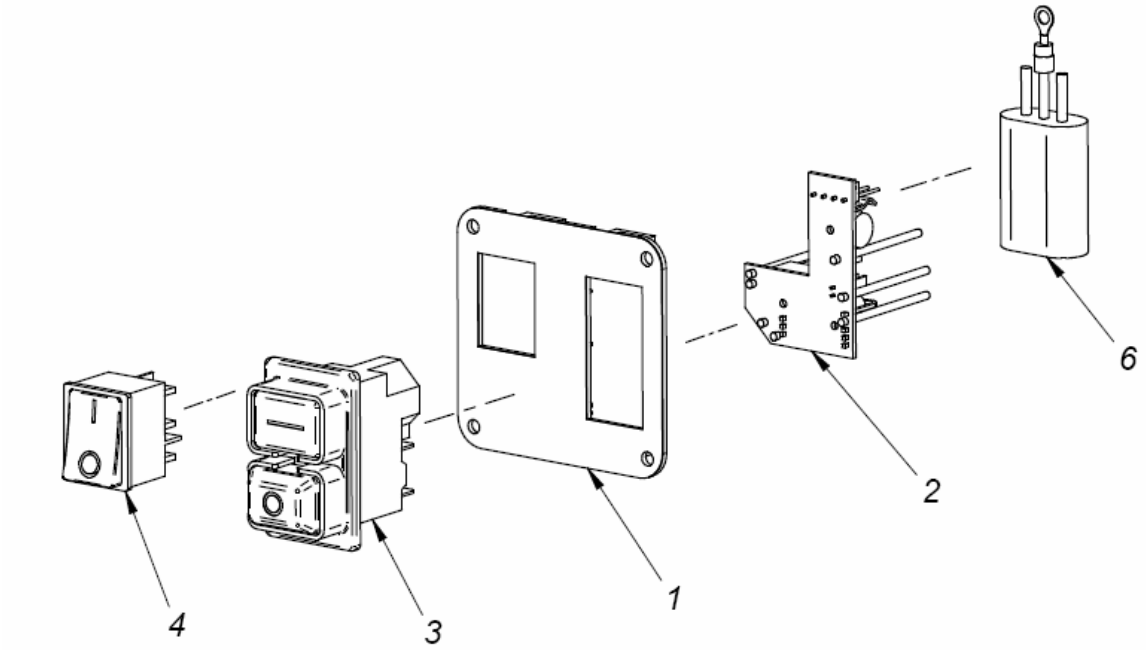
*not shown one the drawing



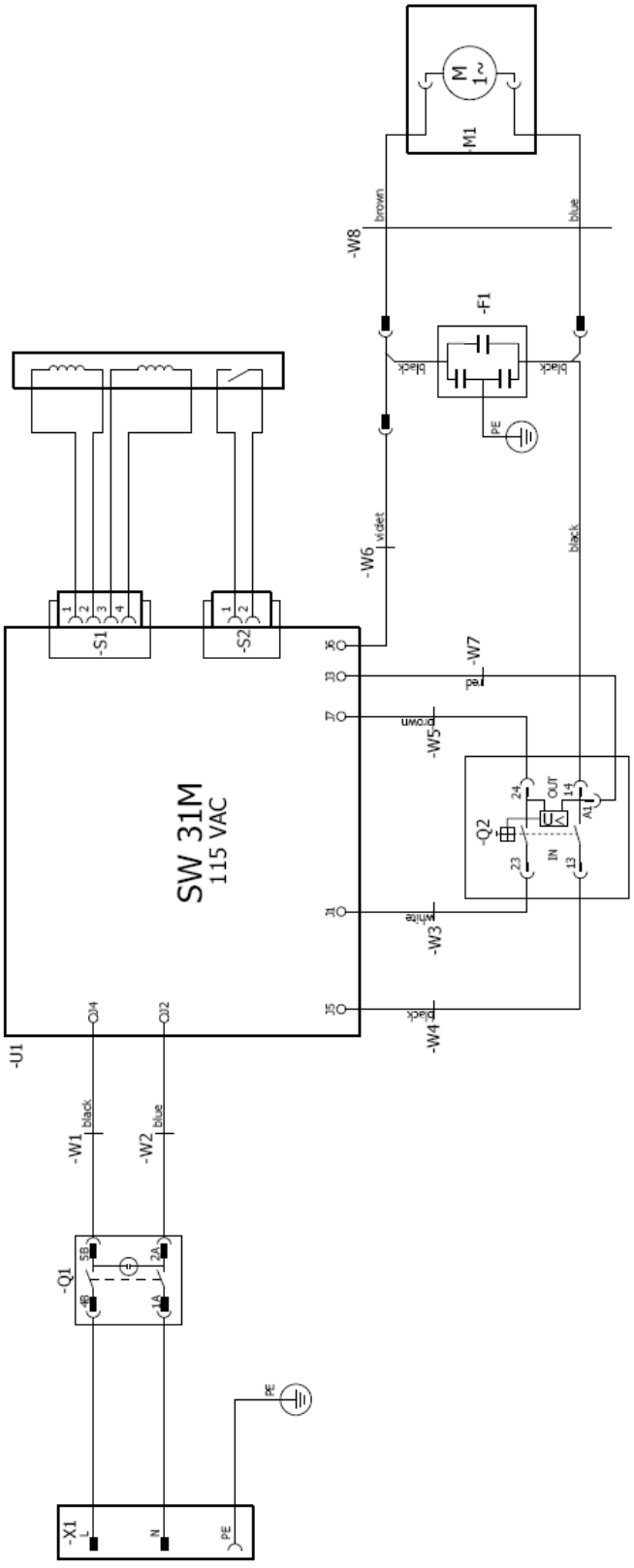
UKL-0440-05-00-00-1			COOLANT BOTTLE ASSY	
ITEM	**PART NUMBER**	**VERSION**	**DESCRIPTION**	**QTY**
5.1	BTL-0440-05-01-00-4		BOTTLE,	1
5.2	NKR-000116		NUT	1
5.3	ZWR-000010		COOLANT VALVE	1
5.4	PDK-0232-00-01-00-0		SEAL WASHER	1
5.5	WAZ-000004		PLASTIC HOSE 4MM	0,16m



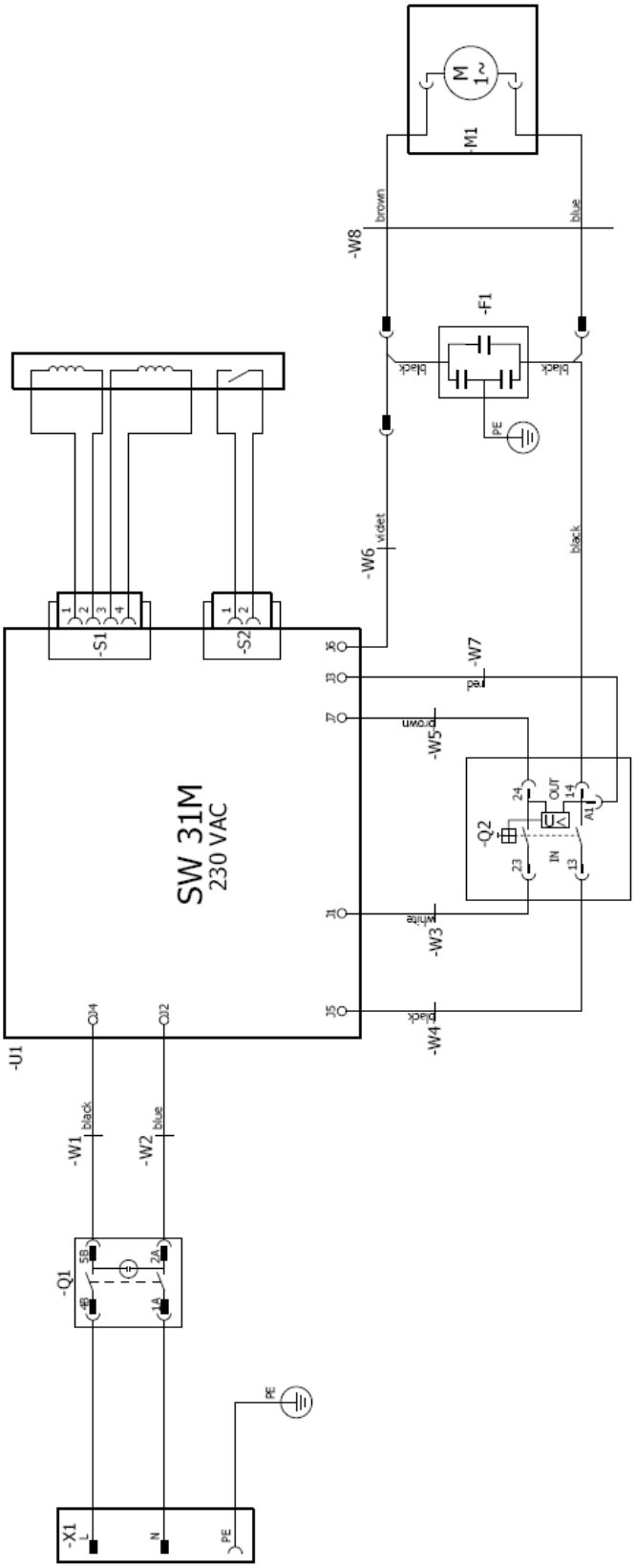
PNL-0272-04-00-00-4		2015	CONTROL PANEL ASSEMBLY /120V,	
PNL-0272-04-00-00-5		2014	CONTROL PANEL ASSEMBLY /230V,	
ITEM	**PART NUMBER**	**VERSION**	**DESCRIPTION**	**QTY**
6.1	MSK-0300-04-01-00-1	2018	PANEL PLATE ASSY	1
6.1.1*	NKL-0440-15-08-01-0		LABEL PANEL PLATE	1
6.2	STR-0257-04-10-00-2		ELECTRONIC CONTROLLER SW-31M /120V,	1
6.2	STR-0257-04-10-00-3		ELECTRONIC CONTROLLER SW-31M /230V,	1
6.3	WLC-000005		SWITCH START-STOP /115V,	1
6.3	WLC-000007		SWITCH START-STOP /230V,	1
6.4	PNK-000013		SWITCH MAGNET	1
6.6	FLT-0257-04-12-00-1		INTERFERENCE ELIMINATOR,	1



8. ELECTRICAL DIAGRAMS



Wiring diagram – 120V version



Wiring diagram – 230V version

9. DECLARATION OF CONFORMITY

Declaration of compatibility

We

PROMOTECH Ltd.
Elewatorska street 23/1
15-620 Bialystok, Poland

declare with full responsibility that product:

D1 DRILLING MACHINE

which the declaration applies to is in accordance with the following standard(s) placed below:

EN 50144-1, EN 55014 and satisfies safety regulations of guidelines: 2004/108/EC, 2006/95/EC, 2006/42/EC

Bialystok, 2010-04-19

_____
Prezes

10. MACHINE'S TEST CERTIFICATE

Machine control card

Product: D1

Serial No. _____

Date of test: _____

Electric test results:

Test	Result
Test with sinusoidal voltage of 1000 V and frequency 50 Hz	
Resistance of the protective circuit [Ω]	

The above-mentioned product meets the requirements of safe usage as prescribed in standard IEC-745

Name of tester _____

Quality Control_____

11. WARRANTY CARD

WARRANTY CARD No.....

Steelmax Tools LLC in the name of Manufacturer warrants the Drilling Machine to be free of defects in material and workmanship under normal use for a period of 12 months from date of sold.

This warranty does not cover cutters, damage or wear arises from misuse, accident, tempering or any other causes not related to defects in workmanship or material.

Date of Production ..... Serial No .....

Quality Control: .....

Date of Purchase: .....

Signature of Seller……..

3/4" SHANK M2AL ANNULAR CUTTERS

		1" D.O.C.	2" D.O.C.
M2AL Cutter Diameter	DECIMAL EQUIVALENT	PART#	PART#
7/16"	0.4375	SM-AC-0438-1	SM-AC-0438-2
1/2"	0.5000	SM-AC-0500-1	SM-AC-0500-2
9/16"	0.5625	SM-AC-0563-1	SM-AC-0563-2
5/8"	0.6250	SM-AC-0625-1	SM-AC-0625-2
11/16"	0.6875	SM-AC-0688-1	SM-AC-0688-2
3/4"	0.7500	SM-AC-0750-1	SM-AC-0750-2
13/16"	0.8125	SM-AC-0813-1	SM-AC-0813-2
7/8"	0.8750	SM-AC-0875-1	SM-AC-0875-2
15/16"	0.9375	SM-AC-0938-1	SM-AC-0938-2
1"	1.0000	SM-AC-1000-1	SM-AC-1000-2
1-1/16"	1.0620	SM-AC-1063-1	SM-AC-1063-2
1-1/8"	1.1250	SM-AC-1125-1	SM-AC-1125-2
1-3/16"	1.1870	SM-AC-1188-1	SM-AC-1188-2
1-1/4"	1.2500	SM-AC-1250-1	SM-AC-1250-2
1-5/16"	1.3120	SM-AC-1313-1	SM-AC-1313-2
1-3/8"	1.3750	SM-AC-1375-1	SM-AC-1375-2
1-7/16"	1.4370	SM-AC-1438-1	SM-AC-1438-2
1-1/2"	1.5000	SM-AC-1500-1	SM-AC-1500-2
1-9/16"	1.5620	SM-AC-1563-1	SM-AC-1563-2
1-5/8"	1.6250	SM-AC-1625-1	SM-AC-1625-2
1-11/16"	1.6870	SM-AC-1688-1	SM-AC-1688-2
1-3/4"	1.7500	SM-AC-1750-1	SM-AC-1750-2
1-13/16"	1.8120	SM-AC-1813-1	SM-AC-1813-2
1-7/8"	1.8750	SM-AC-1875-1	SM-AC-1875-2
1-15/16"	1.9370	SM-AC-1938-1	SM-AC-1938-2
2"	2.0000	SM-AC-2000-1	SM-AC-2000-2
2-1/16"	2.0620	SM-AC-2063-1	SM-AC-2063-2
2-1/8"	2.1250	SM-AC-2125-1	SM-AC-2125-2
2-3/16"	2.1870	SM-AC-2188-1	SM-AC-2188-2
2-1/4"	2.2500	SM-AC-2250-1	SM-AC-2250-2
2-5/16"	2.3120	SM-AC-2313-1	SM-AC-2313-2
2-3/8"	2.3750	SM-AC-2375-1	SM-AC-2375-2
14mm	0.5512	SM-AC-14-M-1	SM-AC-14-M-2
15mm	0.5906	SM-AC-15-M-1	SM-AC-15-M-2
16mm	0.6299	SM-AC-16-M-1	SM-AC-16-M-2
17mm	0.6693	SM-AC-17-M-1	SM-AC-17-M-2
18mm	0.7087	SM-AC-18-M-1	SM-AC-18-M-2
19mm	0.7480	SM-AC-19-M-1	SM-AC-19-M-2
20mm	0.7874	SM-AC-20-M-1	SM-AC-20-M-2
21mm	0.8268	SM-AC-21-M-1	SM-AC-21-M-2
22mm	0.8661	SM-AC-22-M-1	SM-AC-22-M-2
23mm	0.9055	SM-AC-23-M-1	SM-AC-23-M-2
24mm	0.9449	SM-AC-24-M-1	SM-AC-24-M-2
25mm	0.9843	SM-AC-25-M-1	SM-AC-25-M-2
26mm	1.0230	SM-AC-26-M-1	SM-AC-26-M-2
28mm	1.1020	SM-AC-28-M-1	SM-AC-28-M-2
29mm	1.1410	SM-AC-29-M-1	SM-AC-29-M-2
31mm	1.2200	SM-AC-31-M-1	SM-AC-31-M-2